

IN THE CLAIMS

1. (currently amended) A service providing system, including, at least, a plurality of electronic appliances, a service server, and a communication network, a authentication server being connected to the communication network,

each electronic appliance being equipped with a wireless communication terminal function, being mounted in a moving body, and being assigned a unique device ID, and

the service server having a function for providing a predetermined service and storing said unique device ID for each electronic appliance to which service can be provided,

the service providing system comprising;
authentication process means for allowing a communication terminal apparatus to access the electronic appliance only when the communication terminal apparatus has been authenticated;

registration means for registering said unique device ID assigned to each electronic appliance, and

transmission means for using said unique device ID to provide access, via the communication network, from the service server to a specified electronic appliance to which a specified service needs to be provided and transmitting service information, which has a predetermined content for realizing the specified service, to the specified electronic appliance,

in which the communication terminal apparatus can access the electronic appliance only through the authentication server.

2. (currently amended) A service providing system, including, at least, a plurality of electronic appliances, a service server, and a communication network, an authentication server being connected to the communication network,

each electronic appliance being equipped with a

wireless communication terminal function, being mounted in a moving body, and being assigned a unique device ID, and

the service server having a function for providing a predetermined service and storing said unique device ID for each electronic appliance to which services can be provided,

the service providing system comprising:

authentication process means for allowing a communication terminal apparatus to access the electronic appliance only when the communication terminal apparatus has been authenticated:

registration means for registering said unique device ID assigned to each electronic appliance;

first transmission means for providing access, via said communication network, from one of said electronic appliances to said service server and transmitting information which has a predetermined content that can be used by a specified service from said electronic appliance to said service server; and

second transmission means for using said unique device ID to provide access, via said communication network, from said service server to a specified electronic appliance to which a specified service needs to be provided and transmitting service information, which has a predetermined content for realizing the specified service, to the specified electronic appliance only through the authentication server.

3. (currently amended) A service providing system, including, at least, a plurality of electronic appliances, a

plurality of mobile communication terminal apparatuses, and a communication network, an authentication server being connected to the communication network,

each electronic appliance being equipped with a wireless communication terminal function, being mounted in a

moving body, and being assigned a unique device ID, and each mobile communication terminal apparatus being assigned a unique terminal ID,

the service providing system comprising:

authentication process means for allowing a communication terminal apparatus to access the electronic appliance only when the communication terminal apparatus has been authenticated;

registration means for registering said unique device ID assigned to each electronic appliance;

transmission means for using said unique device ID to provide access, via said communication network, from one of said mobile communication terminal apparatuses to a specified electronic appliance, and transmitting service information, which includes a predetermined content for realizing a specified service to be provided, to the specified electronic appliance,

in which the communication terminal apparatus can access the electronic appliance only through the authentication server.

4. (currently amended) A service providing system, including, at least, a plurality of electronic appliances, a plurality of mobile communication terminal apparatuses, and a communication network, a authentication server being connected to the communication network,

each electronic appliance being equipped with a wireless communication terminal function, being mounted in a moving body and being assigned a unique device ID, and

each mobile communication terminal apparatus being assigned a unique terminal ID,

the service providing system comprising:

authentication process means for allowing a communication terminal apparatus to access the electronic

appliance only when the communication terminal apparatus has been authenticated;

registration means for registering said unique device ID assigned to each electronic appliance;

first transmission means for providing access, via the communication network, from one of said electronic appliances to one of the mobile communication terminal apparatuses and transmitting information, which has a predetermined content that can be used by a specified service, from the one of said electronic appliances to said one of the mobile communication terminal apparatuses; and

second transmission means for using said unique device ID to provide access, via said communication network, from one of said mobile communication terminal apparatuses to a specified electronic appliance and transmitting service information, which has a predetermined content for realizing a specified service, to the specified electronic appliance,

in which the communication terminal apparatus can access the electronic appliance only through the authentication server.

5. (previously presented) A service providing system, composed of an electronic appliance, a communication network, a communication terminal apparatus, and an authentication server,

the electronic appliance being one of an electronic appliance that is mounted in a moving body and is equipped with a mobile communication terminal function and a mobile communication terminal apparatus with a fixed access path to the communication network, and the authentication server being connected to said communication network,

the service providing system comprising:

access means that enables the communication terminal apparatus to access the electronic appliance via the

communication network using a device ID that has been assigned uniquely to the electronic appliance, the communication terminal apparatus accessing the electronic appliance only through the authentication server;

terminal ID generating means, provided on said communication network, for generating a terminal ID for said communication terminal apparatus using information that identifies said fixed access path by which said communication terminal apparatus accesses said communication network;

registration means for registering said device ID assigned to the electronic appliance;

authentication process means, provided in said authentication server, for using said terminal ID to perform an authentication process for said communication terminal apparatus that has accessed the authentication server and allowing said communication terminal apparatus to access said electronic appliance only when the communication terminal apparatus has been authenticated; and

transmission/reception means for receiving and transmitting service information, which has a predetermined content for realizing a specified service, between said communication terminal apparatus that has been authenticated by said authentication process means and said electronic appliance.

6. (currently amended) A communication system where data communication is performed between a plurality of communication appliances via a network, an authentication server being connected to the communication network,

the communication system comprising:

a plurality of electronic appliances, each equipped with a wireless communication function and having a unique device ID for identifying the electronic appliance,

authentication process means for allowing a

communication terminal apparatus to access the electronic appliance only when the communication terminal apparatus has been authenticated;

registration means for registering said unique device ID assigned to each electronic appliance;

a wireless communication apparatus for connecting to said network and performing wireless communication that specifies one of the electronic appliances using said unique device ID; and

an authentication apparatus connected to said network and including group information for each of a plurality of groups of said electronic appliances to which unrestricted data communication can be performed, the group information being associated with the unique device IDs of the electronic appliances in the group, the authentication apparatus judging whether unrestricted data communication can be performed, based on the unique device ID of a electronic appliance and the group information, and controlling the wireless communication apparatus,

in which the communication terminal apparatus can access the electronic appliance only through the authentication server.

7. (previously presented) The communication system according to Claim 6, wherein said electronic appliance comprises a first electronic appliance, said unique device ID comprises a first unique device ID, and said wireless communication function comprises a first wireless communication function, further comprising:

a plurality of second electronic appliances, each of which having a second wireless communication function and a second unique device ID; and

a communication apparatus for communicating with one

of said second electronic appliances and connecting to said network, receiving said second unique device ID from said second electronic appliance, and transmitting to said authentication apparatus a communication means ID that specifies communication means that is communicating with said second electronic appliance and further transmitting to said authentication apparatus said received second device ID.

8. (previously presented) The communication system according to Claim 7,

wherein the group information provided in said authentication apparatus further controls said second electronic appliance by associating each of said second unique device IDs of the second electronic appliances with said communication means ID.

9. (currently amended) A communication apparatus for controlling communication between a plurality of electronic appliances, each electronic appliance being connected to a network, being provided with a unique device ID for identifying the electronic appliance, and being capable of transmission,

the communication apparatus comprising:

communication means for communicating with another communication apparatus via said network;

storage means for storing group information in which the plurality of electronic appliances, which are permitted to communicate between themselves after the communication is authenticated, are registered as a group;

authentication process means for allowing a device to access an electronic appliance only when the respective device has been authenticated;

registration means for registering a unique device ID assigned to each electronic appliance; ,

judgement means for judging, based on said unique device IDs transmitted via the network before communication commences between said plurality of electronic appliances and group information stored in said storage means, whether the communication is permitted; and

control means for having said communication means transmit a result of said judgement means to an exchange apparatus that is connected to said network and performs an exchange process for communication between electronic appliances based on the transmitted unique device IDs,

in which the respective device can access the electronic appliance only through an authentication server.

10. (previously presented) The communication apparatus according to Claim 9,

wherein a wireless communication is performed between said electronic appliances and the exchange apparatus.

11. (previously presented) The communication apparatus according to Claim 10,

wherein said electronic appliances are navigation apparatuses.

12. (previously presented) The communication apparatus according to Claim 10,

wherein said electronic appliances are mobile telephones.

13. (previously presented) The communication apparatus according to Claim 9,

wherein each of said electronic appliances is connected to said communication means in said exchange apparatus, and

when communicating, each of said electronic appliances transmits said unique device ID to said communication apparatus, said exchange apparatus transmits a communication means ID for specifying said communication means to said communication apparatus,

said communication apparatus authenticates said electronic appliance based on said group information, by referring to a combination of said transmitted unique device ID and said transmitted communication means ID.

14. (previously presented) The communication apparatus according to Claim 11,

wherein the group information is generated when an electronic appliance communicates with the communication apparatus via the network.

15. (previously presented) The communication apparatus according to Claim 9,

wherein the group information also includes content data that can be used by the electronic appliances which are registered in the group information.

16. (Previously Presented) The communication apparatus according to Claim 15,

wherein the content data is geographical data.